

FE233

WIRE DRAG

Diagram No. 1222-4

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

Type of Survey Wire Drag
Field No. R/H-20-2-69
Office No. FE-233 WD

LOCALITY

State Virginia
General Locality Chesapeake Bay
Locality Off Little Creek and
Cape Henry
1969
CHIEF OF PARTY
LCDR C. Andreasen

LIBRARY & ARCHIVES

DATE August 26, 1983

☆U.S. GOV. PRINTING OFFICE: 1980-766-230

Area 2
Chits

12254
12256
12222
12221
12220

12205 scA
12255

3003-NC

TO SIGN OFF SEE
"RECORD OF APPLICATION"

HYDROGRAPHIC TITLE SHEET

FE - 233 WD

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form,
filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

R/H-20-2-69

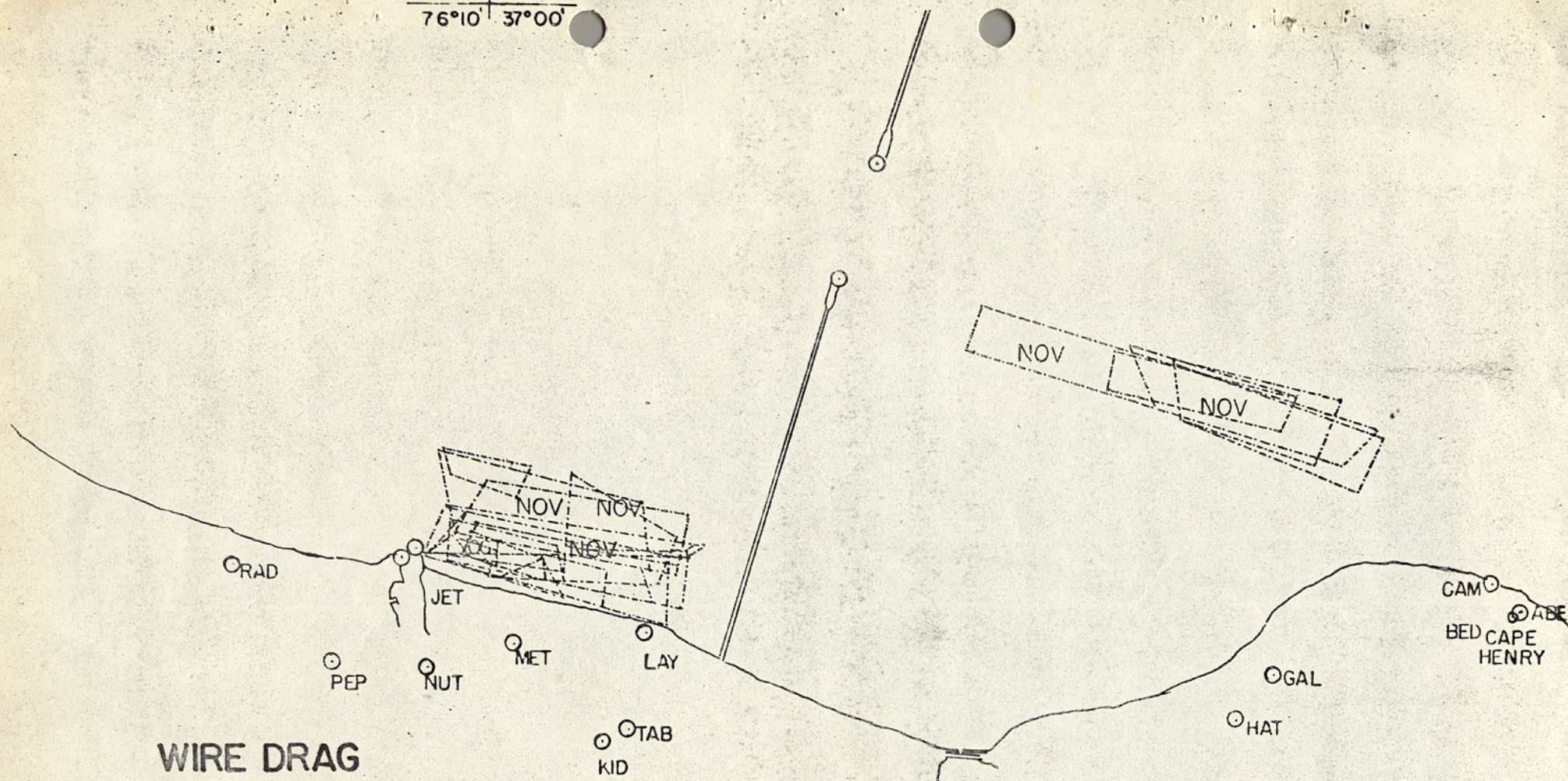
State VirginiaGeneral locality Chesapeake BayLocality Off Little Creek and Cape HenryScale 1:20,000Date of survey Oct. 24 - Nov. 26, 1969Instructions dated Oct. 8, 1969Project No. AMC-SP-5-69Vessel NOAA Ships RUDE & HECK and Launches HE-1, RU-1, RU-3, & EX-3Chief of party LCDR Christian AndreasenSurveyed by LT Merritt Walter, ENS Pressley Campbell, & ENS Joseph MorleySoundings taken by ~~echo sounder, hand lead, pole~~ Wire DragGraphic record scaled by N/AGraphic record checked by N/AProtracted by M. B. HicksonAutomated plot by N/AVerification by M. B. Hickson

Effective Depths

Soundings in ~~fathoms~~ feet at MLW ~~MLW~~REMARKS: All times are recorded in local time (075° Meridian).00015 / SURF MSM 6/11/85

626

76°10' 37°00'



WIRE DRAG

AMC-SP-5-69

CHESAPEAKE BAY ENTRANCE

U.S.C.&G.S.S. RUDE & HECK

LCDR.C.ANDREASEN, CHIEF OF PARTY

PROGRESS SKETCH

SCALE 1:80,000

1969

OCT. NOV.

626

ATTACHMENT II
Progress Sketch

Descriptive Report
to
Accompany
Wire Drag Investigation
Project AMC-SP-5-69
Little Creek, Virginia
1969

LCDR Christian Andreassen - Chief of Party

A. Authority

The authority for this survey is contained in Project Instructions AMC-SP-5-69, Little Creek, Virginia, dated 8 October 1969.

B. Character & Limits of the Work

The area surveyed is in the Chesapeake Bay between Little Creek and Cape Henry, Virginia, and consisted of two items: an obstruction plotted at 36°55.8'N, 76°09.5'W and a wreck (PD) ✓ plotted at 36°57.3'N, 76°04.05'W.

C. Control and Shoreline - *See section 2. of the Verification Report.*

The investigation was carried out on the largest scale chart of the area, C&GS 481, 1:20,000 scale. All control was ✓ visual in accordance with publication 20-1 requirements, using charted triangulation objects.

D. Date of Survey

The survey commenced on 24 October and terminated 26 November 1969. ✓

E. Tide Reducers - *Smooth tides have been applied to the smooth sheets (A&D).*

All soundings and effective depths are in feet at Mean Low Water using predicted tides. See tide note. All least depth ✓ soundings were accomplished with divers and hand leads.

E. Tide Reducers (Cont'd.)

All soundings, effective depths used in this report and on the preliminary area and depth sheet are in feet at Mean Low Water using predicted tides. Because of the time delay between our field work and the arrival of smooth tides, processing with smooth tides could not be accomplished prior to our 1970 sailing. No predicted tides were entered in the volumes. Smooth tides need to be entered and processed. *Smooth tides were entered & processed during verification.*

F. Junctions - *See section 3. of the Verification Report.* ✓

Items investigated formed no junctions with other surveys. ✓

G. Splits

AWOL 4/11/85 msm
The wreck (PD) plotted at $36^{\circ}57.30'N$, $76^{\circ}04.5^{\circ}W$ was not dragged to completion due to termination of field work for the season under direction from AMC. - *See section 5. of the Verification Report. (V.R., Pg. 4 Section 5, a., 2))* ✓

AWOL 6/11/85 msm
The obstruction plotted at $36^{\circ}55.8'N$, $76^{\circ}09.5^{\circ}W$ is considered to have been wire dragged over a sufficient area with no splits remaining. - *See section 5. of the Verification Report. Section 5, 1, e)*
Hung at 15' and cleared by 14' at lat. $36^{\circ}55.80'N$ long. $76^{\circ}09.48'W$ delete charted information and chart an obstruction cleared by 14 ft. in the location shown on the present survey. ✓

H. GROUNDING & SHOALS

DAY	Lat & Long		Cleared Depth	Least Depth
✓ 1. a day 27 Oct. 69 4 corners	36°56'02"N 76°10'12"W 36°55'57"N 76°10'09"W 36°55'55"N 76°10'04"W 36°55'57"N 76°09'58"W	N buoy aground fix #3-#9 #1 buoy aground fix #4-#9 #2 buoy aground #5-#9 (buoys set too deep)	17 19' ✓ 15' 15'	Groundings not in conflict with ✓ charted depths.
✓ 2. a day 27 Oct. 69	36°55' ^{.90'} 54 "N 76°10' ^{.04'} 04 "W ^{.07'}	HANG - ^{@ 16' - possible hang on bottom} (buoys grounded- Do not chart vessels unable to tow buoys off)	(see V.R. Item 5.a. i), c) 15' 17" from W to E 15' 16" from E to W	
✓ 3. a day 27 Oct. 69	36°55' ^{.88'} 52 "N 76°09' ^{.36'} 36 "W ^{.59'}	HANG - ^{@ 17' - same hang as strip F-1} (wire cable-150' recovered from bottom)	15' from W to E 15' from E to W	Wire cable removed, do not chart
✓ 4. b day 3 Nov. 69	36°55'.88' 76°10'.14'	HANG - ^{@ 15'} temp. between buoy #3-#4 (investigation proved fish net hung in wire)	14' from W to E 7' from E to W	Do not chart
✓ 5. b day 3 Nov. 69	36°55'48"N 76°08'46"W 36°55'47"N 76°08'39"W	N buoy aground fix #4-#5 (buoy set too deep)	14 15' ✓ Grounding not in conflict with charted depths.	
✓ 6. c day 4 Nov. 69	36°57' ^{.73'} 40 "N 76°05' ^{.14'} 14 "W ^{.30'} approx. ^{.17'}	HANG - ^{@ 34'} hang was a wreck previously wire dragged to 32' our drag eff. depth was 35' hang is not the obstr. located by fath. on 4-7177 W.D. - see the Verification Report, section 4 b.3)	Not Cleared 35' invest. No L.D.	
7. e day 13 Nov. 69	36°57' ^{.17'} 13 "N 76°03' ^{.18'} 18 "W ^{.30'}	HANG - ^{@ 38' (estimated)} temp. drag parted (see paragraph "K") (not addressed in paragraph K) hang not investigated	38' from E to W 36' from W to E ✓	
✓ 8. e day 13 Nov. 69	36°57' ^{.06'} 02 "N 76°03' ^{.42'} 42 "W ^{.70'}	HANG - ^{@ 38' - possible hang on bottom} charted depth 39' 40' eff. depth 39' (hang caused by buoy grounded)	35' from E to W only ✓	
✓ 9. f day 14 Nov. 69	36°56'28"N 76°09'50"W	HANG (see paragraph "K") - No hang was noted for strip F-1, only that the drag parted after post #8. There is no indication in any of the Survey records of a hang on this strip.	21' (D day) from W to E 20' from E to W	
✓ 10. f day 14 Nov. 69 4 corners	36°55'52"N 76°09'34"W 36°55'48"N 76°09'38"W 36°55'49"N 76°09'25"W 36°55'46"N 76°09'29"W	#1 Buoy grounded fix #31-#32 (buoy set too deep)-ships unable to pull off	15' ✓ from W to E 13' ✓ from E to W 15'	Grounding not in conflict with charted depths

H. GROUNDING & SHOALS (CONT'D.)

Day				Cleared Depth	Least Depth
11. g day	36°55' ^{.81'} 47"N				
17 Nov. 69	76°09' ^{.48'} 27"W	Plum 5 6/11/85 msm	HANG - ^{@ 15' - possible hang on bottom} Charted depth ^{14'-16'} 13'. eff. depth ^{15'} 13'. (sag, buoy grounded)	13' in both directions 14' from W to E ✓ 13' from E to W ✓	
12. j day	36°55' ^{.88'} 55"N		HANG - ^{@ 16' (estimated) - same hang as strip A-2} (buoy weight slipped, buoy set at 16'. Cleared depth 19')	19' 15' from W to E ✓ 15' from E to W ✓	Do not chart hang
19 Nov. 69	76°09' ^{.59'} 27"W		HANG - Pinnacle rock (see paragraph "K") ^{@ 19'} item #2.)	19' from W to E ✓ 18' from E to W ✓	21.8' ^{ok} 2 D. not valid - see sect. 6 of the Verification Report.
13. l day	36°55' ^{.95'} 56"N	Plum 5 6/11/85 msm	See V.R. pg 6, item # 14) See Evaluators Report		
25 Nov. 69	76°09' ^{.06'} 04"W				
L day	36°56.52'	Plum 5 6/11/85 msm	Temp. Hang @ 22' - Navy divers found the hang to be cargo lost during transfer between ships.	21' - from E to W only ✓	
K day	36°55.86'	Plum 5 6/11/85 msm	Temp. Uninvestigated Hang @ 19'	18' from E to W ✓ 13' from W to E ✓	
	76°08.74'	44.4			
Note: All depths contained in this section are based on predicted tides. All depths have been corrected for smooth tides. ✓					
J day	(approx.) 36°56.17'		Grounding of buoys N#1 at pos#2 at a depth of 22' - charted depths are 25' - see section 5. of the Verification Report.	21' from W to E only ✓ Do not chart. See V.R. section 5, a, 1), h	
	76°09.90'				

I. General Notes

See Paragraph "K".

J. Currents

Currents run along shore and change as predicted in the current tables.

Drag experience showed an apparent tendency for the bottom current to shift approximately 30 minutes to 1 hour after the surface currents. The surface currents followed the tables very well.

K. Discrepancies and Comparison with Previous Survey & Charts — See sections 4 & 5 of the Verification Report.

The findings of this survey have been compared with C&GS Chart 481.

1. At latitude $36^{\circ}56'.52''$ N, longitude $76^{\circ}09'.98''$ W, an obstruction was located extending two feet off the bottom. The item was buoyed and the Navy notified. Navy divers intended to raise the obstruction after identifying it as a piece of cargo lost during transfer between ships in the area. Later consultation with the Navy revealed that they had lost the buoyed location of the object, and further attempts to recover it would not be made. It is recommended that the chart show an obstruction at this location with a depth of 23.0 feet. — Concur ✓

Chart 481
21' Obst

2. At latitude $36^{\circ}55'.95''$ N and longitude $76^{\circ}09'.06''$ W, an obstruction was located with a diver-verified least depth of 21.8 feet. The obstruction was irregular in shape, but had an overall size of approximately 4 ft. by 6 ft. Its distance above the bottom was 5.4 feet. It should be noted that charted depths in this area are 22 feet. A depression or hole containing the obstruction exists, the limits of which were not investigated. Since the obstruction does not extend above the general bottom, it is recommended that this obstruction not be charted. — Do not concur — see section 5 of the Verification Report.

This obstruct. was identified as a rock. (in the list of hangs & the volume.) See also V.R. pg 4, item f.

*Do not concur, recommend charting 22' Obst *

L. Personnel and Equipment

The following color scheme was used for towing vessels: describes this as a concrete clump.

RUDE	ASV 90	- Blue
HECK	ASV 91	- Red
RU-3	20' Bertram	- Purple
EX-3	25' Bertram	- Green

Additionally launches HE-1 & RU-1 were used for towing vessels.

The party was organized as follows:

LCDR Christian Andreasen	- Chief of Party CO Ships RUDE & HECK
	Officer in Charge of Ship HECK or RU-3
LT Merritt Walter	- XO Ships RUDE & HECK
	Officer in Charge of Ship RUDE or EX-3
ENS Pressley Campbell	- Operations Officer
ENS Joseph Morley	- Administration Officer
	Field Works Officer

626

*Disregard recommendation on item #2. This item is superseded by H-9255 WD (1971-72). Chart a subm. obstn. cleared to 17 ft. See H-9255 WD (1971-72)

M. Miscellaneous

None

N. Recommendations

item #1

The obstruction, a concrete clump, plotted at latitude 36°55.8'N, longitude 76°09.5'W was not located. Sea & Ship propellor action from the numerous amphibious landings at this point have in all probability made this item undistinguishable from the bottom, no longer presenting a hazard to navigators. Note: Presurvey review showed this obstruction to be a 3' x 3' concrete block. It is felt that sufficient wire drag has been accomplished to prove that the item presents no danger to navigation. It is recommended that this item be removed from the chart. - Do not concur - see section 5.4.1 of the Verification Report.

item #2

The wreck, plotted at latitude 36°57.3'N, longitude 76°04.05'W, in anchorage area LA-3 was not dragged to completion. Each drag strip through the area had excessive lift on the same section on different days, while passing over a particular area, as if the drag was sliding over an obstruction without hanging. Additional work is required under future instructions in order to prove or disprove this item. - Concur - see section B. of the Verification Report.

O. Statistics

<u>DATE</u>	<u>DAY LETTER</u>	<u>VOL. NO.</u>	<u>NAUTICAL MILES</u>	<u>NO. OF POSITIONS</u>	<u>TENDER SOUNDINGS</u>	<u>TENDER POSITIONS</u>
27 Oct	a	I	1.0	38	2	2
3 Nov	b	I	1.7	32	1	1
4 Nov	c	II	2.9	70	1	1
7 Nov	d	II	1.7	42		
13 Nov	e	II	2.7	44	2	2
14 Nov	f	I	3.9	64	1	1
17 Nov	g	I	1.7	48	1	1
18 Nov	h	I	1.6	20		
19 Nov	j	III	0.8	12	1	1
24 Nov	k	II	1.7	26		
25 Nov	l	II	1.7	38	1	1
26 Nov	m	IV	1.9	34		
Totals	12	4	23.3	468	10	10

Area 2.0 square nautical miles

APPROVAL SHEET

The attached report, records, and plotting sheets have been inspected by me and are approved.

Christian Andreasen
Christian Andreasen
LCDR USESSA
Commanding
USC&GSS RUDE & HECK

Note: To date, smooth processing of records is incomplete and all recommendations contained herein are based on Predicted Tides. Records are being forwarded to the Atlantic Marine Center, as per their instructions, for final processing.

Smooth work remaining:

Enter smooth tides
Draw smooth effective depth diagrams
Smooth sheet
Smooth Area and Depth sheet

} *accomplished
during processing*

<u>NAME</u>	<u>SOURCE</u>		
ABE	Cape Henry Lighthouse (New)	G 1550	1943
CAM	Cape Henry, Weather Bureau, Signal Mast	G 4267	1939
EVA	Casemate (Use)	G 4267	1939
IDA	Chesapeake Beach Tower A (Use)	G 4267	1939
JET	Little Creek	G 4267	1944
LAY	Little Creek, NAB Radar Reflector	G10989	1955
MET	Little Creek, NAB Desert Cove Water Tank	G10989	1955
RAD	Radio Transmitting Tower	G 5694	1941
SOX	Rude & Heck established hydro signal <i>Thimble Shoal Tunnel South Light, 1968</i>	Volume I; guide vessel	
TUB	4th order triangulation — Labeled as <i>R/H Hydrographic station since no data for this station could be found.</i>	AMC Operations	

Control Listing FE-233 WD

Station Number	Station Name	Latitude	Longitude
001	CAPE HENRY LIGHTHOUSE, 1887	36° 55' 34.335"	76° 00' 27.216"
002	CAPE HENRY WEATHER BUR MAST, 1939	36° 55' 46.556"	76° 00' 42.177"
003	CASEMATE USE, 1939	36° 55' 49.493"	76° 01' 53.280"
004	CHESAPEAKE BEACH TOWER A USE, 1939	36° 55' 09.623"	76° 08' 06.323"
005	LITTLE CREEK, 1929	36° 55' 57.125"	76° 10' 35.961"
006	LITTLE CREEK, NAB RADAR REFLECT, 1955	36° 55' 21.634"	76° 08' 30.694"
007	LITTLE CREEK, NAB DESERT COV TK, 1955	36° 55' 14.382"	76° 09' 42.063"
008	RADIO TRANSMITTING TOWER, 1941	36° 55' 48.926"	76° 12' 18.828"
009	THIMBLE SHL TUNL S LT, 1968	36° 57' 59.363"	76° 06' 45.986"
010	R/H HYDROGRAPHIC STATION	36° 58' 50.800"	76° 06' 24.000"
011	LITTLE CREEK AMPHIB BASE TK, 1952	36° 55' 06.190"	76° 11' 22.544"
012	LITTLE CREEK NAV AMPH BASE TK, 1952	36° 54' 31.740"	76° 08' 53.000"

The source of station 009 is the FFAIDS Listing for OPR-D103.

No G.P. could be found for station 010 which was noted as being 4th order triangulation. The listed G.P. was scaled from the boat sheets.

626

All other listed control stations are published N.G.S. control.

TIDAL NOTE

Hourly tide heights were supplied by the Washington Office (Chief, Tidal Section C-3312) as observed at Hampton Roads (Sewells Pt.), Virginia, Standard Tide Gage (75th Time Meridian).

The following corrections were applied to the indicated investigations:

1. For the Minnie "V" in Naval Anchorage L-A,
1^h 04^m subtracted from hourly data.
2. For investigation in Amphibious Anchorage L-E,
0^h 54^m subtracted from hourly data.

See the Approved Tide Note.

DATE: May 11, 1982

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 863-8610 Hampton Roads, Virginia

Period: October 1 - November 30, 1969

HYDROGRAPHIC SHEET: 20-2-69

OPR: AMC SP-5-69


Locality: Chesapeake Bay, Virginia

Plane of reference (mean ~~lower~~ low water): 3.9 feet

Height of Mean High Water above Plane of Reference is 2.5 feet

REMARKS: Recommended Zoning,

For Item #1, at GP 36°56.00' latitude, 76°09.00' longitude and Item #2
at GP 36°57.00' latitude, 76°04.00' longitude, zone on 863-8610, Hampton
Roads, Virginia and apply -1 hour time correction and x1.06 range ratio.


Chief, Tidal Datums and Information Branch

NOAA FORM 76-40
(8-74)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

Replaces C&GS Form 567.

<input checked="" type="checkbox"/> TO BE CHARTED	REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE	ORIGINATING ACTIVITY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> COMPILATION ACTIVITY <input checked="" type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)
<input type="checkbox"/> TO BE REVISED	<i>Processing Division</i>	<i>Virginia</i>	<i>Chesapeake Bay</i>	<i>7-1-82</i>	
<input type="checkbox"/> TO BE DELETED	<i>Atlantic Marine Center</i>		<i>Off Little Creek & Cape Henry</i>		

The following objects HAVE ☐ HAVE NOT ☒ been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO. <i>AMC-SP-5-69</i>	JOB NUMBER	SURVEY NUMBER <i>FE-233 WD</i>	DATUM <i>N.A. 1927</i>	METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED	
POSITION							
CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	LATITUDE		LONGITUDE		OFFICE	FIELD
		° ' "	D.M. Meters	° ' "	D.P. Meters		
	<i>Cape Henry Light</i> <i>(CAPE HENRY LIGHTHOUSE, 1887)</i>	<i>36° 55'</i>	<i>34.335"</i>	<i>76° 00'</i>	<i>27.216"</i>	<i>Published</i> <i>Triangulation</i> <i>Data</i>	<i>12254</i> <i>(481)</i>
	<i>Little Creek Harbor Jetty Light 1</i> <i>(LITTLE CREEK, 1929)</i>	<i>36° 55'</i>	<i>57.125"</i>	<i>76° 10'</i>	<i>35.961"</i>	<i>Published</i> <i>Triangulation</i> <i>Data</i>	<i>12254</i> <i>(481)</i>
	<i>Thimble Shoal Tunnel-South Light</i>	<i>36° 57'</i>	<i>59.363"</i>	<i>76° 06'</i>	<i>45.986"</i>	<i>Published in</i> <i>FFAIDS Listing</i> <i>for OPR-D103</i>	<i>12254</i> <i>(481)</i>
	<i>NO POSITIONS SAME AS DIAFILE</i>						
	<i>7/17/85 KDV</i>						

626

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	NAME	ORIGINATOR
OBJECTS INSPECTED FROM SEAWARD		<input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
POSITIONS DETERMINED AND/OR VERIFIED		FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	<i>M.B. Hickson</i>	<input checked="" type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' <i>(Consult Photogrammetric Instructions No. 64,</i>		
OFFICE I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75 FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field P - Photogrammetric L - Located Vis - Visually V - Verified 1 - Triangulation 5 - Field identified 2 - Traverse 6 - Theodolite 3 - Intersection 7 - Planetable 4 - Resection 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75 *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	FIELD (Cont'd) B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982 II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V+Vis.' and date. EXAMPLE: V-Vis. 8-12-75 **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.	

GEOGRAPHIC NAMES

FE-233 WD

Name on Survey	A ON CHART NO. 12254 (481)	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP ATLAS	G RAND McNALLY ATLAS	H U.S. LIGHT LIST	K
CAPE HENRY	✓	✓							1
CHESAPEAKE BAY	✓	✓							2
CRUMPS BANK	✓	✓							3
EAST OCEAN VIEW	✓	✓							4
LITTLE CREEK	✓	✓							5
LITTLE CREEK	✓	✓							6
LYNNHAYEN ROADS	✓	✓							7
THIMALE SHOAL CHANNEL	✓	✓							8
VIRGINIA (title)	✓	✓							9
									10
									11
									12
									13
									14
									15
									16
									17
									18
									19
									20
									21
									22
									23
									24
									25

Approved:

Charles E. Harrington
Chief Geographer - N/CG 2x5

26 July 1983

526

HYDROGRAPHIC SURVEY STATISTICS

FE-233 WD

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION		AMOUNT		RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET		IN OR 2		BOAT SHEETS & PRELIMINARY OVERLAYS		2	
DESCRIPTIVE REPORT		1		SMOOTH OVERLAYS: 2 POS. ARC, EXCESS			
DESCRIP- TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS	
ENVELOPES							
CAHIERS							
VOLUMES							
BOXES	1		1 - raw	data, misc.			

T-SHEET PRINTS (List)

SPECIAL REPORTS (List)

OFFICE PROCESSING ACTIVITIES

The following statistics will be submitted with the cartographer's report on the survey

PROCESSING ACTIVITY	AMOUNTS		
	PRE- VERIFICATION	VERIFICATION	TOTALS
POSITIONS ON SHEET			231
POSITIONS CHECKED	0	231	231
POSITIONS REVISED	0	10	10
XXXXXXXXXX N/A	-	-	-
XXXXXXXXXXXXXXXXXXXX N/A	-	-	-
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED	0	0	0
TIME - HOURS			
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION) Survey Automation	0	0	0
VERIFICATION OF CONTROL	0	6	6
VERIFICATION OF POSITIONS (Plotting of Strips)	0	85	85
VERIFICATION OF XXXXXXXXXX Strips (Subdivision of Strips)	0	37	37
COMPILATION OF SMOOTH SHEET (A&D and P.N.O.)	0	61	61
APPLICATION OF TOPOGRAPHY	0	1	1
APPLICATION OF PHOTOBATHYMETRY	0	0	0
JUNCTIONS	0	0	0
COMPARISON WITH PRIOR SURVEYS & CHARTS	0	18	18
VERIFIER'S REPORT	0	14	14
OTHER	0	107	107
TOTALS	0	329	329
Pre-Verification by N/A	Beginning Date -----	Ending Date -----	
Verification by M.B.Hickson	Beginning Date Apr. 19, 1982	Ending Date Jul. 2, 1982	
Verification Check by R.D.Sanocki	Time (Hours) 3	Date Jul. 2, 1982	
Marine Center Inspection by Hydrographic Inspection Team (AMC)	Time (Hours) 4	Date Jul. 7, 1982	
Quality Control Inspection by J.P. Kaulsturf	Time (Hours) 34	Date Sept 15, 1983	
Requirements Evaluation by	Time (Hours)	Date 026	

A. Myers 3 hrs 9-26-83

ATLANTIC MARINE CENTER
VERIFICATION REPORT

REGISTRY NO.: FE-233 W.D.

FIELD NO.: R/H-20-2-69

Virginia, Chesapeake Bay, Off Little Creek and Cape Henry

SURVEYED: October 24 through November 26, 1969

SCALE: 1:20,000

PROJECT NO.: AMC-SP-5-69

SOUNDINGS: Wire Drag

CONTROL: Visual (Sextant Fixes
on Shore Signals)

Chief of Party C. Andreasen

Surveyed by M. N. Walter
. P. Campbell
. J. Morley

Smooth Sheet by M. B. Hickson

1. PURPOSE OF SURVEY

✓ The purpose of this survey was to investigate and prove or disprove the existence of two items in the Chesapeake Bay off Little Creek and Cape Henry. The results of the investigations are discussed in this report and are portrayed on the smooth sheets (A&D) included in the Descriptive Report. The investigation of item 2 is incomplete. *See H-9255 WD (1971-72) for resolution of the chld dangerous subm. wk in lat. 36°57.30'N, long. 76°04.05'W. (Item 2)*

2. CONTROL AND SHORELINE

a. The source of control was not adequately described in section C. and Attachment I of the Descriptive Report. Section 6.b. of this report addresses this deficiency. *Control is not plotted on the A&D sheets, but is shown on an overlay filed with the survey records.*

b. Shoreline portrayed on the smooth sheets (A&D) is intended for orientation purposes. The source of shoreline is from Chart 481, 17th edition, July 19, 1969. ✓

3. JUNCTIONS

✓ The present field examination junctions with subsequent survey H-9255 W.D. (R/H-20-1-71 and R/H-20-2-72) which has not been completely processed. Upon ✓ completion of H-9255 W.D. a junction will be effected with this field examination.

4. COMPARISON WITH HYDROGRAPHIC SURVEYS

a. Hydrography

H-9814 (1980) 1:10,000

H-9910 (1980) 1:10,000

Comparison with prior hydrographic surveys was not accomplished for this survey. Comparisons of prior data within the common area will be discussed in the Verification Reports of Surveys H-9814 (1980) and H-9910 (1980). ✓

Subsequent hydrographic Surveys H-9814 (1980) and H-9910 (1980) cover 100% of this wire drag survey. Detailed comparisons between these hydrographic surveys and this wire drag survey will be accomplished in the Verification Reports of the above hydrographic surveys. ✓

b. Wire Drag Surveys

H-9255 W.D. (1971-72)
FE-154 W.D. (FE No. 13, 1957)
H-7177 W.D. (1947-48)
H-7028 W.D. (1945)

1) H-9255 W.D. (1971-72) is a subsequent wire drag survey common to the present survey areas and has not been completely processed as of this date. Comparisons with the present survey are deferred until the processing of H-9255 is completed. *V.R. item #3
"a junction will be effected upon completion of processing of H-9255 WB"*

2) FE-154 (F.E. No. 13, 1957) is common to the eastern portion of the area of investigation of item 2 on the present survey. The prior field examination did not cover the charted location of item 2. Within the common area of the present and prior field examinations the present survey obtained effective depths from 5 feet deeper to 3 feet shoaler than the prior survey. No conflicts exist between present and prior effective depths within the common area. *drag* **concur**

3) H-7177 W.D. (1947-48) is common to the western half of the area of investigation of item 2 and a very small area in the northwestern portion of the area of investigation of item 1 on the present survey. Within the common area of item 1, no hangs were encountered by either the present or prior survey. The present survey has effective depths from 5 to 6 feet deeper than the prior survey within the common area of item 1. The present survey hung an obstruction at Latitude $36^{\circ}57.74'$, Longitude $76^{\circ}05.30'$ but neither investigated nor cleared this hang. The hydrographer identified this hang as a wreck hung on a previous wire drag survey. This prior survey shows a 35-foot sounding on an obstruction at Latitude $36^{\circ}57.65'$, Longitude $76^{\circ}05.15'$ (280 meters southeast of the present hang) which the prior survey cleared by 32 feet. The present survey cleared the position of the prior 35-foot sounding by an effective depth of 34 feet in one direction only. As clearance is in one direction only on the present survey, it is recommended that the prior survey 35-foot sounding charted as an obstruction with a 32-foot clearance by wire drag remain as charted and that the uninvestigated hang located by the present survey be charted as a dangerous submerged obstruction in accordance with the results of the present survey. The prior survey located an old hulk at Latitude $36^{\circ}57.55'$, Longitude $76^{\circ}04.54'$ with a hang depth of 34 feet, a sounding of 37 feet, and a clearance depth of 31 feet. The present survey did not hang this wreck but obtained a clearance depth of 35 feet in one direction only. This conflict is not considered significant as clearance on the present survey is in one direction only and the old hulk has possibly *34 ft. hang, not cleared - cleared by 30 ft on H-9255 WB (1971)* **concur - cleared by 35 ft on H-9255 WB (1971-72) in one direction only with no hang encountered**

settled in the 21 years between the prior and present survey. This wreck is charted as an obstruction with the 31-foot clearance by wire drag and since present clearance is in one direction only, it is recommended that the 31-foot clearance by wire drag be retained with the wreck notation. Both the obstruction and the old hulk located by the prior survey have been brought forward to the present survey. The prior survey covers the area where two other hangs were encountered on the present survey but by an effective depth considerably shoaler than the clearance depths obtained on these hangs by the present survey. The present survey has effective depths from 1 to 9 feet deeper than the prior survey within the common area of item 2. No conflicts exist between present and prior effective depths within the common area except the previously mentioned hang on the old hulk at 34 feet. *H-9255 WD (1971-72) also cleared this wreck with 35 ft in the same direction. Recommend charting 35 Wk do not concur*

4) H-7028 W.D. (1945) is common to a small area in the eastern portion of the area of investigation of item 2 on the present survey. The prior survey did not cover the charted location of item 2. The present survey did clear a prior uncleared grounding at Latitude $36^{\circ}56.70'$, Longitude $76^{\circ}02.08'$ of $43\frac{1}{2}$ feet by a clearance depth of 38 feet in one direction. This grounding is charted as a 43-foot sounding and it is recommended to retain this sounding as charted. This grounding has been brought forward to the present survey. The present survey has effective depths from 3 to 15 feet shoaler than the prior survey within the common area. No conflicts exist between present and prior effective depths within the common area. *drag concur*

5. COMPARISON WITH CHART 481, 17th Edition, July 19, 1969

a. Hydrography

Charted hydrography within the common area originates with prior surveys H-7750 (1948-50), H-7721 (1949), H-7090 (1946), H-7089 (1946), H-7024 (1944-45), and H-6962 (1944) and soundings from sources not readily ascertainable. The disposition of the charted hydrography in the common area to this wire drag field examination will be discussed in the Verification Reports of H-9814 (1980) and H-9910 (1980).

Charted wire drag data within the common area originates with prior surveys H-7177 W.D. (1947-48) and H-7028 W.D. (1945) which are adequately discussed in section 4 of this report. Additional charting recommendations based on the results of this present field examination are as follows:

1) Item 1 - is identified as an obstruction; *reported* charted at Latitude $36^{\circ}55.80'$, Longitude $76^{\circ}09.56'$; a 3 ft. by 3 ft. concrete block, source unknown. The present survey did not locate the concrete block, however an unidentified hang listed as *Do not concur expunge this reported obstr. & chart a dangerous submerged obstr. as described in item 5.a.1) e on page 4 of the V.R.* e) below is approximately 95 meters east of the charted obstruction. A clearance depth of 14 feet was obtained over the reported position. As clearance depths throughout a $\frac{1}{2}$ mile radius of search are not within 3 feet of the bottom, the item is not disproved. It is recommended that this item be retained as charted. Seven hangs and one grounding were encountered during the investigation on item 1. The hangs and grounding are as follows:

a) Obstruction - cargo lost during transfer between Navy ships, hung at an effective depth of 22 feet at Latitude $36^{\circ}56.52'$, Longitude $76^{\circ}09.98'$ and cleared (in only one direction) by an effective depth of 21 feet. It is recommended that this item be charted as a dangerous submerged obstruction in accordance with the results of the present survey. *concur*

[21] Obstr

b) Temporary hang on Fish Net - hung at an effective depth of 15 feet at Latitude $36^{\circ}55.88'$, Longitude $76^{\circ}10.14'$ and cleared by an effective depth of 14 feet. It is recommended that this hang not be charted as a fish net hung in 1969 is not presently considered a hazard to navigation and additionally the hang is outside the anchorage area and in close proximity to the shore. *concur*

c) Uninvestigated hang, possible hang on bottom - hung at an effective depth of 16 feet (estimated) at Latitude $36^{\circ}55.90'$, Longitude $76^{\circ}10.07'$ and cleared by an effective depth of 15 feet. As charted depths in the area of the hang are 16 to 18 feet and subsequent survey H-9910 (1980) depths are 18 feet, it is recommended that this hang not be charted as it is outside the anchorage area, in close proximity to the shore, claimed as due to a mis-set upright by the hydrographer, and displays the characteristics of a bottom hang. *Do not chart*

d) Debris, 150 feet of wire cable recovered off the bottom - hung at an effective depth of 16 feet (estimated) at Latitude $36^{\circ}55.88'$, Longitude $76^{\circ}09.59'$ and cleared by an effective depth of 15 feet. It is recommended that this item be charted as a dangerous submerged obstruction in accordance with the results of the present survey. *Do not concur. The wire cable hung on to the drag wire and was removed from the water. Do not chart.*

e) Uninvestigated hang, possible hang on bottom - hung at an effective depth of 15 feet at Latitude $36^{\circ}55.81'$, Longitude $76^{\circ}09.48'$ and cleared by an effective depth of 14 feet. Due to the close proximity to the charted position of item 1, it is recommended that this item be charted as a dangerous submerged obstruction in accordance with the results of the present survey. *Concur, this may be the 3x3' concrete block now charted as a dangerous subm. obst. rep. See item 5.a.1) on pg. 3 of the V.R.*

f) Rock - hung at an effective depth of 19 feet (estimated) at Latitude $36^{\circ}55.95'$, Longitude $76^{\circ}09.06'$ and cleared by an effective depth of 19 feet. It is recommended that this item be charted as a dangerous submerged obstruction in accordance with the results of the present survey. *Described as a concrete clump on H-9255 (1971-72) & the present survey. Do not concur. Diver held a legline on this item and a least depth of 22 ft was obtained. See also D.R. pg. 5, item K.2.*

g) Uninvestigated temporary hang - hung at an effective depth of 19 feet at Latitude $36^{\circ}55.86'$, Longitude $76^{\circ}08.74'$ and cleared by an effective depth of 18 feet. It is recommended that this item be charted as a dangerous submerged obstruction in accordance with the results of the present survey. *concur*

h) Grounding - grounding of drag at an effective depth of 22 feet at approximately Latitude $36^{\circ}56.17'$, Longitude $76^{\circ}09.90'$ and cleared by an effective depth of 21 feet. Charted depths in this area are 25 feet and subsequent survey H-9910 (1980) depths in the area are 27 feet. Although this grounding indicates a shoaler bottom than charted, it is recommended that the grounding not be charted as subsequent survey H-9910 (1980) shows no evidence of shoaling in the area and there is the possibility of an upright slippage in the grounded sections. *concur*

2) Item 2 - is identified as a wreck, PD; charted at Latitude $36^{\circ}57.30'$, Longitude $76^{\circ}04.05'$; submerged wreck of the fishing vessel MINNIE V; source unknown. The present survey did not locate the item but obtained a clearance depth of 36 feet over the reported position. As the clearance depths are not within three feet of the bottom and the area of investigation is not complete, the wreck is not disproved. It is recommended that this item be retained as charted. Three hangs were encountered during the investigation on item 2. These hangs are as follows: *This item was assigned to H-9255 WD (1971-72). See H-9255 for a charting resolution.*

**Disregard this recommendation. Chart a subm. obstn cleared by 17 ft as shown on H-9255 WD (1971-72)*

a) ⁴ Uninvestigated hang - hung at an effective depth of 34 feet at Latitude $36^{\circ}57.73'$, Longitude $76^{\circ}05.30'$ and not cleared. This hang was claimed by the hydrographer to be a wreck hung on a prior wire drag survey, however there are no indications or documents to support this claim. It is recommended that this hang be charted as a dangerous submerged obstruction in accordance with the results of the present survey. *concur*

See also D.R. pg 3, #6 & V.R. pg. 2, item # 4.b)3. AWOIS 11/19/84 MSM

b) Uninvestigated hang, possible hang on bottom - hung at an effective depth of 38 feet at Latitude $36^{\circ}57.06'$, Longitude $76^{\circ}03.70'$ and cleared (in only one direction) by an effective depth of 35 feet. As charted depths in the area are 40 to 41 feet and subsequent survey H-9814 (1980) depths in the area are 40 to 41 feet, it is recommended that this hang not be charted since the hang displays the characteristics of a bottom hang. *(Grounding)*

concur

c) Uninvestigated temporary hang - hung at an effective depth of 38 feet at Latitude $36^{\circ}57.17'$, Longitude $76^{\circ}03.30'$ and cleared by an effective depth of 38 feet. It is recommended that this hang be charted as a non dangerous submerged obstruction since it protrudes less than 3 feet above the bottom as charted depths and subsequent survey H-9814 (1980) depths are 40 to 41 feet in the area.

chart 138 obst AWOIS 11/19/84 MSM

b. Aids to Navigation

No floating aids to navigation were located by the present survey. Three fixed aids to navigation were used as control stations and are plotted on the accompanying horizontal control overlay. The three fixed aids to navigation are Cape Henry Light (CAPE HENRY LIGHTHOUSE, 1887) and Little Creek Harbor Jetty Light I (LITTLE CREEK, 1929) which are published triangulation stations and Thimble Shoal Tunnel South Light which is a private maintained aid published in the Fixed and Floating Aids to Navigation List for OPR-D103. These three fixed aids to navigation are listed in the survey control list.

control overlay is filed with the survey records

6. CONDITION OF SURVEY

The condition of the survey is satisfactory except as follows:

a. Field Work and Records

1) The entire survey was conducted using local time (075° W. Meridian) instead of Universal Coordinated Time (0° Meridian). ✓

2) The investigation of item 2 is not complete. Only approximately 25% of the one mile radius area of search was covered. ✓

3) In the area covered in the item 2 investigation, effective depths ranged from 1 to 18 feet above the bottom. Generally effective depths are not within 3 feet of the bottom. ✓

4) In the area covered in the item 1 investigation, effective depths ranged generally from 0 to 6 feet above the bottom. Bottom coverage in this area is good considering the methods and equipment used and the configuration of the bottom in this area. ✓

5) No areas of splits and no areas of insufficient overlap exist in the survey. ✓

6) Eight out of the ten hangs encountered on this survey were not investigated. Two hangs were identified only by retrieving material snagged on the ground wire, the other six hangs remain unidentified. ✓

7) Nine of the 19 survey strips were not field plotted in regard to subdivision for effective depth and drag bights and hangs. Not all strips were used to compile the field A&D sheets. ✓

8) Four strips had uprights set in such a manner as to have one or more deeper sections between two inclined sections leading to lesser depths, which is in conflict with the requirements of section 3-20 of the Wire Drag Manual. In all cases the deeper sections were considered as being set to the depth of the shoaler adjacent sections during processing. ✓

9) No drag journals were written for any of the survey strips. ✓

10) More frequent lift tests would have been desirable. Many strips had only one or two tests per section which is considered marginal for accurate determination of lift values. ✓

11) No survey data was logged for entry into an automated system. All data required plotting by hand during processing. ✓

12) The hang at Latitude $36^{\circ}57.73'$, Longitude $76^{\circ}05.30'$ was not cleared. ✓

13) The hang at Latitude $36^{\circ}56.52'$, Longitude $76^{\circ}09.98'$ and the hang at Latitude $36^{\circ}57.06'$, Longitude $76^{\circ}03.70'$ were cleared in only one direction. ✓

14) The least depth of 21.8 feet taken on the rock hung on strip L-1 was a reduced for predicted tides least depth. Neither the raw least depth nor the value applied for predicted tides was stated in the survey records. At the time stated for the least depth the predicted tide curves show a $-1\frac{1}{2}$ -foot predicted tide corrector and the smooth tides show a $-1\frac{1}{2}$ -foot actual tide corrector indicating that the reduced least depth remains at 21.8 feet. However, since there is no information pertaining to acquisition (diver depth gage, lead line, echo sounder, or Bryson Gage), it is not considered as a useable least depth. *in lat. $36^{\circ}55.95'N$, long. $76^{\circ}09.06'W$ Do not concur, section "E" of the D.R. notes that all L.D. sdgs were acquired with divers and hand leads. This "rock", a clump of concrete, is described by the diver as lying in a depression and not projecting over the surrounding bottom level. See section K, item #2 in the D.R. - Disregard this item, H-9255WD (1971-72) information supercedes this. Chart a subm obst. cleared to 17 ft as shown on H-9255WD (1971-72)*

b. Descriptive Report

1) Prior surveys noted as source material for charted data were not identified nor were any comparisons made with the prior surveys. ✓

2) Charts affected by this survey were not identified by edition number and edition data. Comparisons made by the hydrographer are inadequate and not in compliance with the Wire Drag Manual. ✓

3) Attachment I of the Descriptive Report required the following revisions:

listed. ✓ a) Two control stations used for horizontal control were not

b) No geographic positions of any of the control stations were listed in either the Descriptive Report or any of the survey records. ✓

c) The establishment dates listed for two control stations were in error. ✓

d) Two control stations listed do not have any published geodetic data. Control station 009; Thimble Shoal Tunnel South Light, 1968; is on a published form 76-40 for OPR-D103 with an accuracy code claiming a third order position. Control station 010, R/H Hydrographic station, is claimed to be fourth order triangulation, however no records could be found for this station and therefore the geographic position was scaled from the boat sheet for incorporation into the survey records. ✓

4) The List of Groundings and Shoals, section H, was not complete and was amended during verification. ✓

5) The Descriptive Report did not contain a Hydrographic Title Sheet (Form 77-28). This form was completed during verification and is included in the Descriptive Report. ✓

6) A Geographic Names List (Form 76-155) was compiled during verification and is included in the Descriptive Report. ✓

7) A Nonfloating Aids for Charts List (Form 76-40) was compiled during verification and is included in the Descriptive Report. ✓

8) Necessary corrections made by the verifier ^{and the evaluator} to the Descriptive Report are denoted in red ink. ✓

c. Field Plotting

Field plotting is satisfactory except as noted previously under the Field Work and Records portion of this section. ✓

7. COMPLIANCE WITH PROJECT INSTRUCTIONS

This wire drag field examination adequately complies with Project Instructions AMC-SP-5-69, Little Creek, Virginia, dated October 8, 1969, except as noted in this report. ✓

8. ADDITIONAL FIELD WORK

This is an adequate basic wire drag field examination except as noted in this report for item 2. Additional field work is recommended for item 2. (Item 2 was reassigned and reinvestigated on H-9255 W.D. both in the 1971 and 1972 portions as item 13.) *Item 2 is the wreck of the fishing vessel Minnie V, charted as a dangerous subm wk PD, from a miscellaneous source, in lat. 36°57.30'N, long. 76°04.05'W (charted depths 39 to 40 ft) cleared to 36 ft. See H-9255WD (1971-72) for a charting recommendation.*

9. MISCELLANEOUS

a. Four temporary hangs were encountered during this survey. These temporary hangs are positioned by using all available information pertaining to the hang, however the position is not as accurate as solid hang where numerous cuts for hang positioning are taken. ✓

b. Numerous groundings occurred during this survey, however only groundings that show conflict are smooth plotted. One grounding is smooth plotted, see section 5. of this report for discussions and recommendations. ✓

c. Hangs in void sections were smooth plotted with an estimated effective depth of hang. Four hangs on this survey have estimated effective depths. ✓

d. In strips containing a hang the area past the initial contact of the hang was not claimed for effective depth coverage as the program of testing for lift is not considered sufficient to claim effective depths past the point of hang. ✓

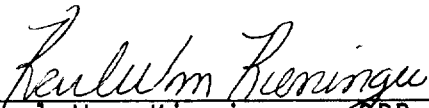
Maurice B. Hickson, III

Maurice B. Hickson, III
Cartographer
Evaluation and Analysis

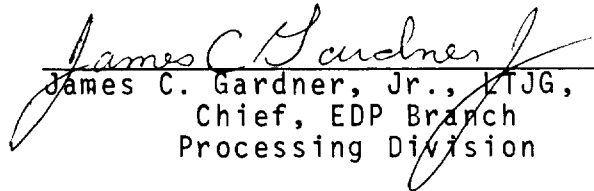
INSPECTION REPORT
FE-233WD

The completed survey has been inspected by the Hydrographic Inspection Team with regard to survey coverage, investigation of hangs and clearance depths, cartographic symbolization, and verification or disproval of charted data. The Verification Report has presented the facts accurately and properly, the procedures used were appropriate, and the recommendations are logical and justifiable. The survey complies with National Ocean Survey requirements except as noted in the Verification Report. The survey records comply with NOS requirements except where noted in the Verification Report. The Hydrographic Inspection Team concurs with the verifier's findings, actions, and recommendations.

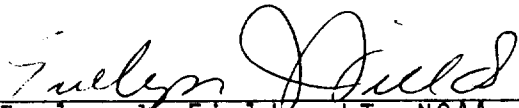
Examined and Approved
Hydrographic Inspection Team



Karl Wm. Kieninger, CDR, NOAA
Chief, Processing Division



James C. Gardner, Jr., LTJG, NOAA
Chief, EDP Branch
Processing Division



Evelyn J. Fields, LT, NOAA
Field Procedures Officer
Operations Division

Approved/Forwarded
July 12, 1982



Richard H. Houlder, RADM, NOAA
Director, Atlantic Marine Center



**UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration**

NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE, MARYLAND 20852

N/CG242:FPS

May 13, 1985

TO: Roy K. Matsushige *RM*
Chief, Hydrographic Surveys Branch

THRU: Chief, Standards Section *gm*

FROM: F. P. Saulsbury *J. P. Saulsbury*
Quality Evaluator

SUBJECT: Quality Control Report for Survey FE-233 WD (1969), Virginia,
Chesapeake Bay, Off Little Creek and Cape Henry

A quality control inspection of FE-233 WD was accomplished to monitor the survey for adequacy with respect to data acquisition; determination of the validity of hangs, groundings, and least depths; validity of cleared depths over obstructions in the survey area; A&D sheets; Verifier's Report; decisions and actions by the verifier; and the cartographic presentation of data. In general, it was found to conform to National Ocean Service standards and requirements except as stated in the Descriptive Report.

Additional notes were appended to Descriptive Report items during quality control inspection.

cc:
N/CG241

NOTE:

6/25/85

BECAUSE THE PROJECT INSTRUCTIONS
FOR THIS SURVEY CANNOT BE FOUND,
NO REPORT OF COMPLIANCE WILL
BE WRITTEN.

Dew
N/CG 24x1



826

